

Economic Considerations in Regulating U.S. Greenhouse Gases:

Virginia Governor's Commission
On Climate Change

May 13, 2008

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ENVIRONMENTAL DEFENSE

finding the ways that work

Introduction: Context for this discussion

Addressing climate change takes effort...

But..

- The most expensive action is to do nothing
- Delay will only drive up the costs
- We have the technology to get started
- Proper public policy will deploy current technology and advance new technology

The Limits of Economic Models to Address Climate Policy

- Would you trust an economic model to answer the question:

Should I save more for retirement or pay for a lifesaving operation for my child?

- Most economic models:
 - Consider only the costs of action, but not the benefits
 - Cannot address issues that span generations
 - Must rely on the past as a guide to the future
 - Have difficulty predicting technological change

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When you look at the costs of doing nothing...
doing nothing is no longer an option.

“Agriculture faces serious decline from global warming.”

Center for Global Development report, 9/13/07

“Climate change impacts will place immense strains on public sector budgets.”

University of Maryland study, 10/16/07

“Global warming threatens roads, rail lines, ports, airports and other important infrastructure.”

National Research Council, National Academy of Sciences, 3/12/08

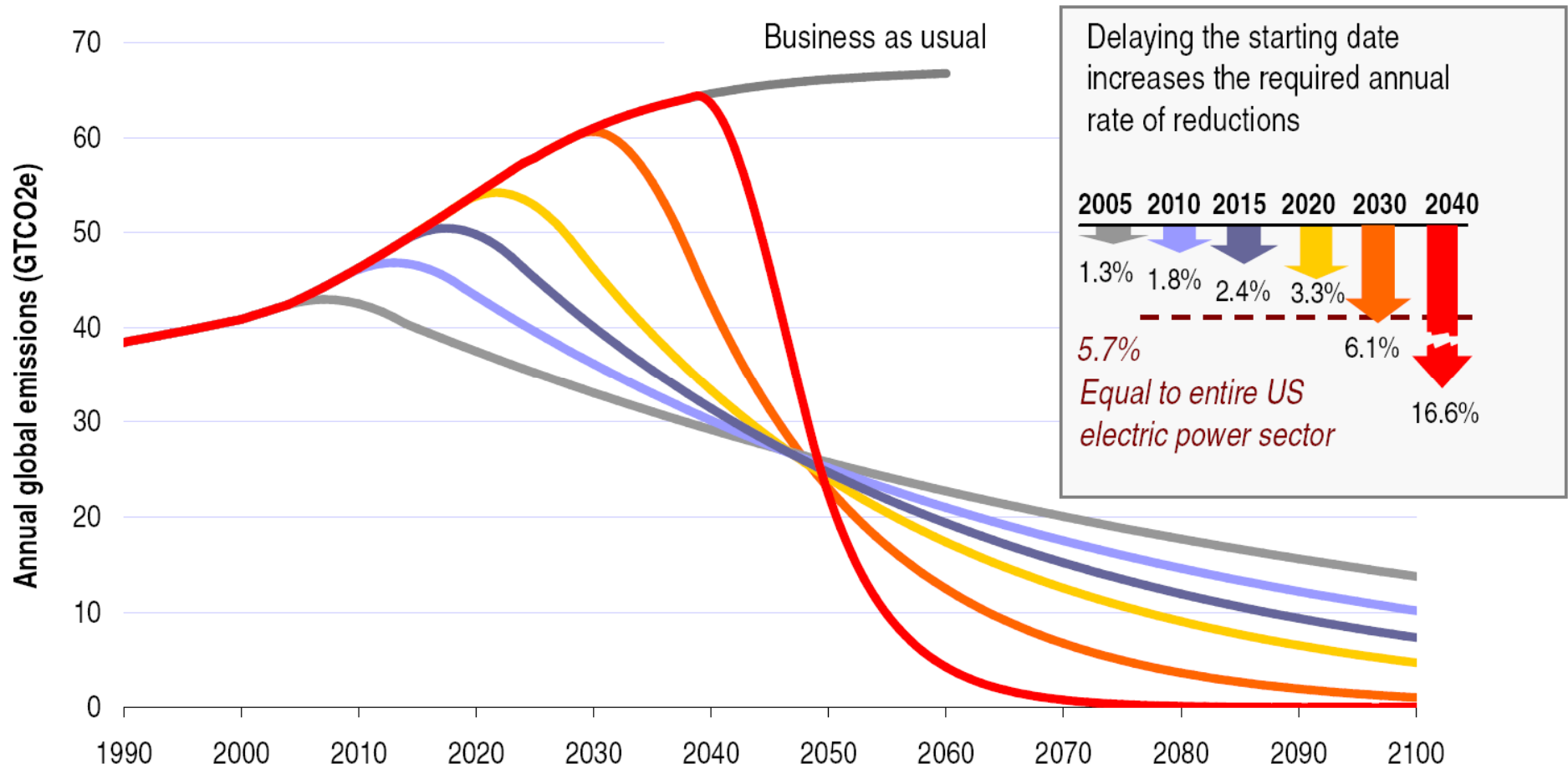
“Climate change poses a serious threat... causing widespread political instability.”

Center for Naval Analysis report, 4/16/07

“If you don't take action on climate change, you can be sure that our economies will go down the drain in the next 30 years.”

Former U.S. Federal Reserve Chairman Paul Volcker

Delay will only drive up the costs

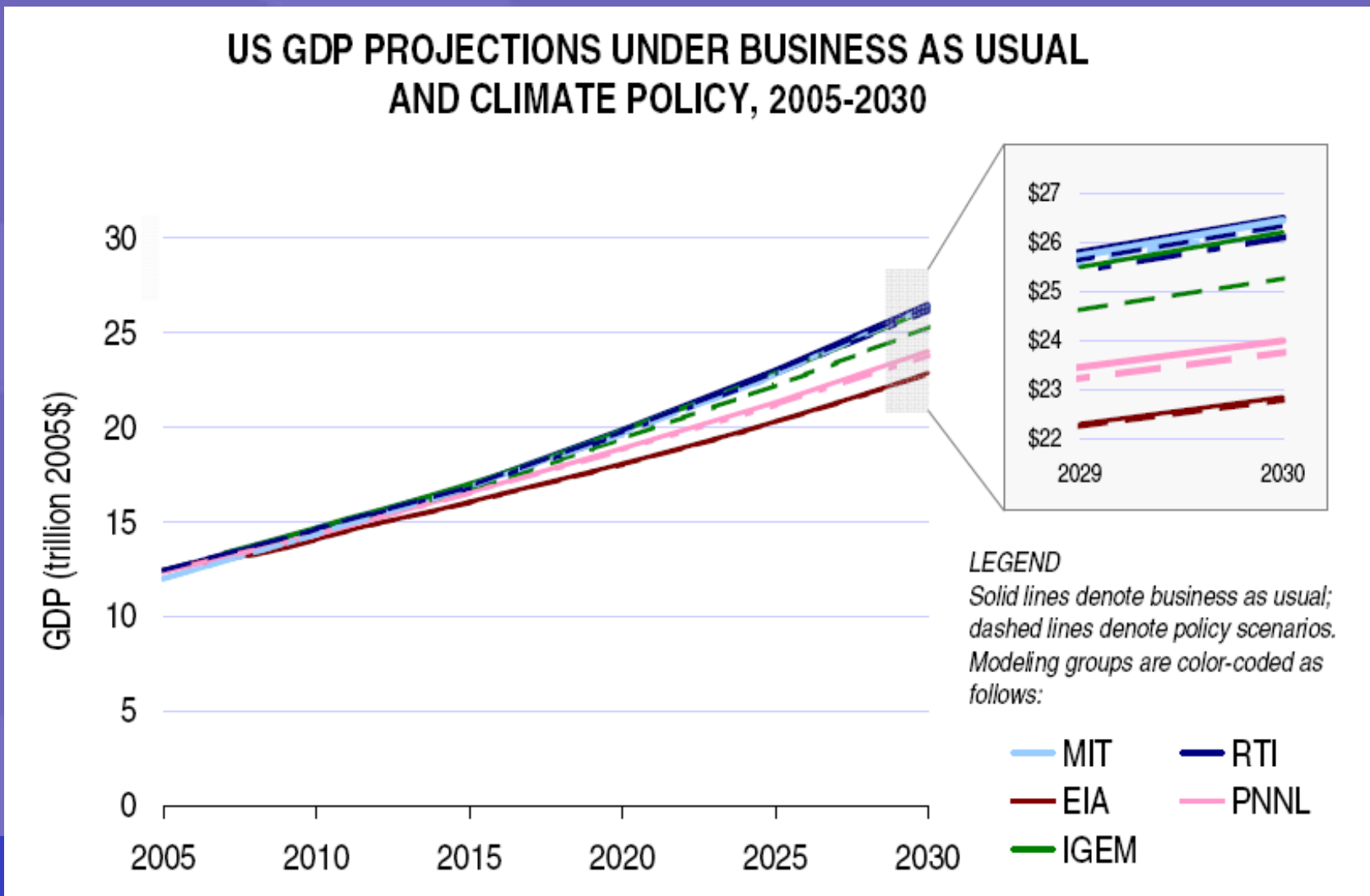


Even if you only look at costs – and not
benefits...
we find the costs are small.

- Consensus across models: Impact will be small
 - Ambitious climate policy consistent with robust economic growth
 - Minimal impacts on GDP growth or level
 - Projections suggest energy bill impacts of a few dollars a month
 - Household consumption impact is less than a penny on the dollar
- Climate policy in the context of the dynamic U.S. economy
 - Estimated impact dwarfed by uncertainties in economic growth
 - Impacts on energy prices much smaller than recent volatility
 - Projected job loss a fraction of jobs created and destroyed every 3 months

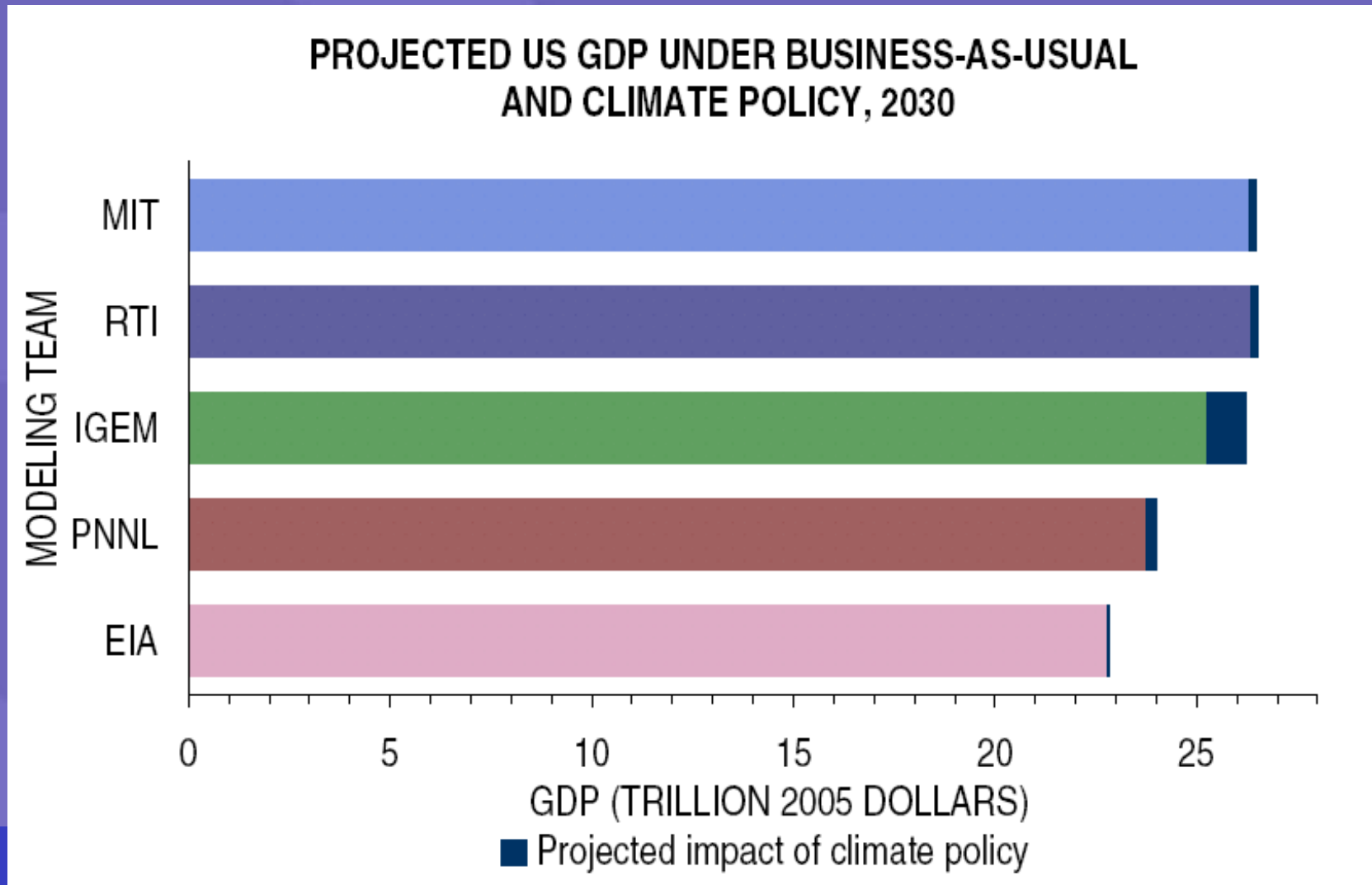
ENVIRONMENTAL DEFENSE FUND GDP FORECASTS

Strong climate policy is consistent with robust U.S. economic growth.



ENVIRONMENTAL DEFENSE FUND GDP FORECASTS

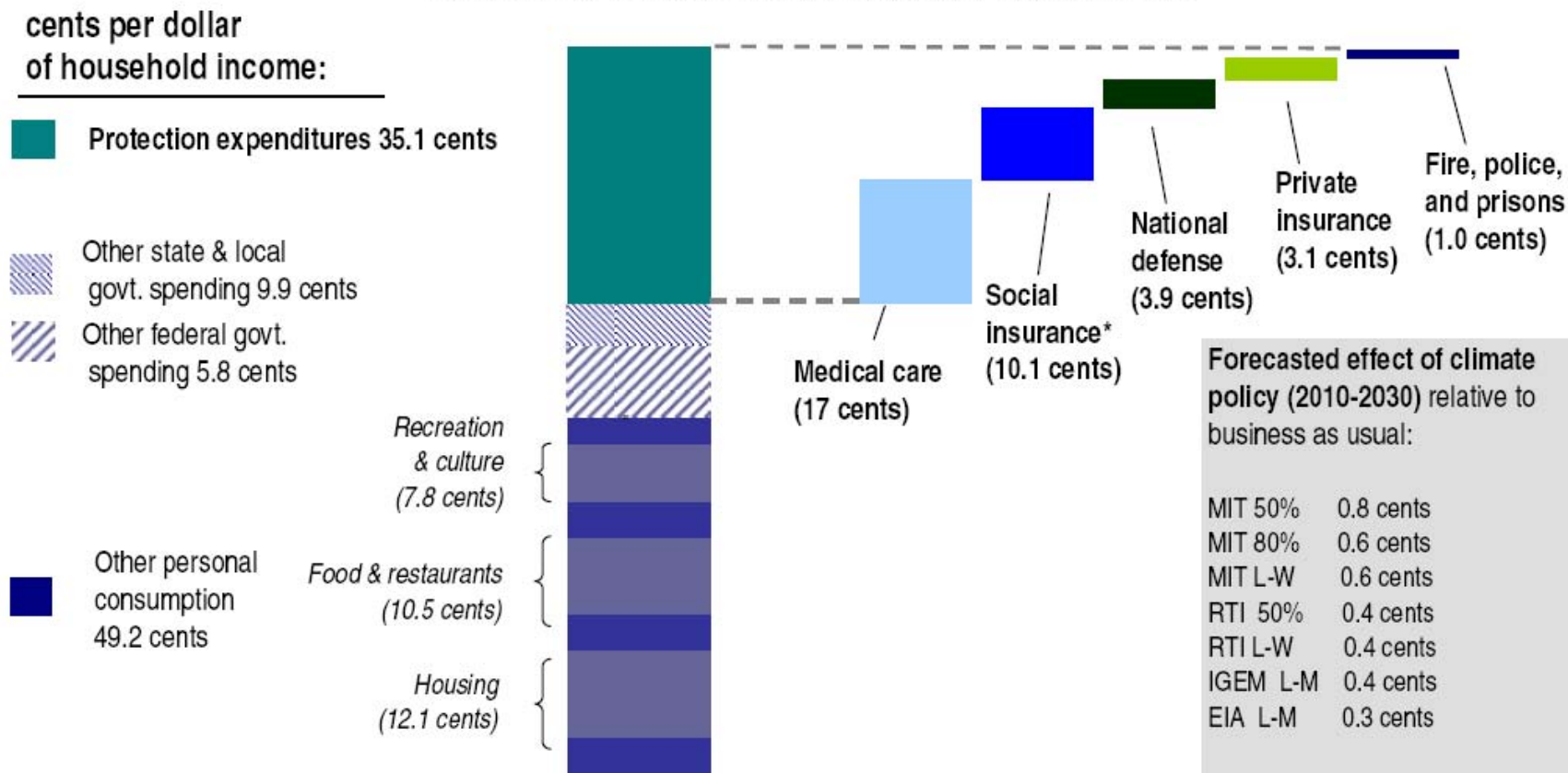
The projected economic impact of capping carbon is dwarfed by the variation in BAU forecasts.



ENVIRONMENTAL DEFENSE FUND HOUSEHOLD CONSUMPTION

Impact on household consumption is less than a penny per dollar of income.

HOUSEHOLD EXPENDITURES ON PROTECTION



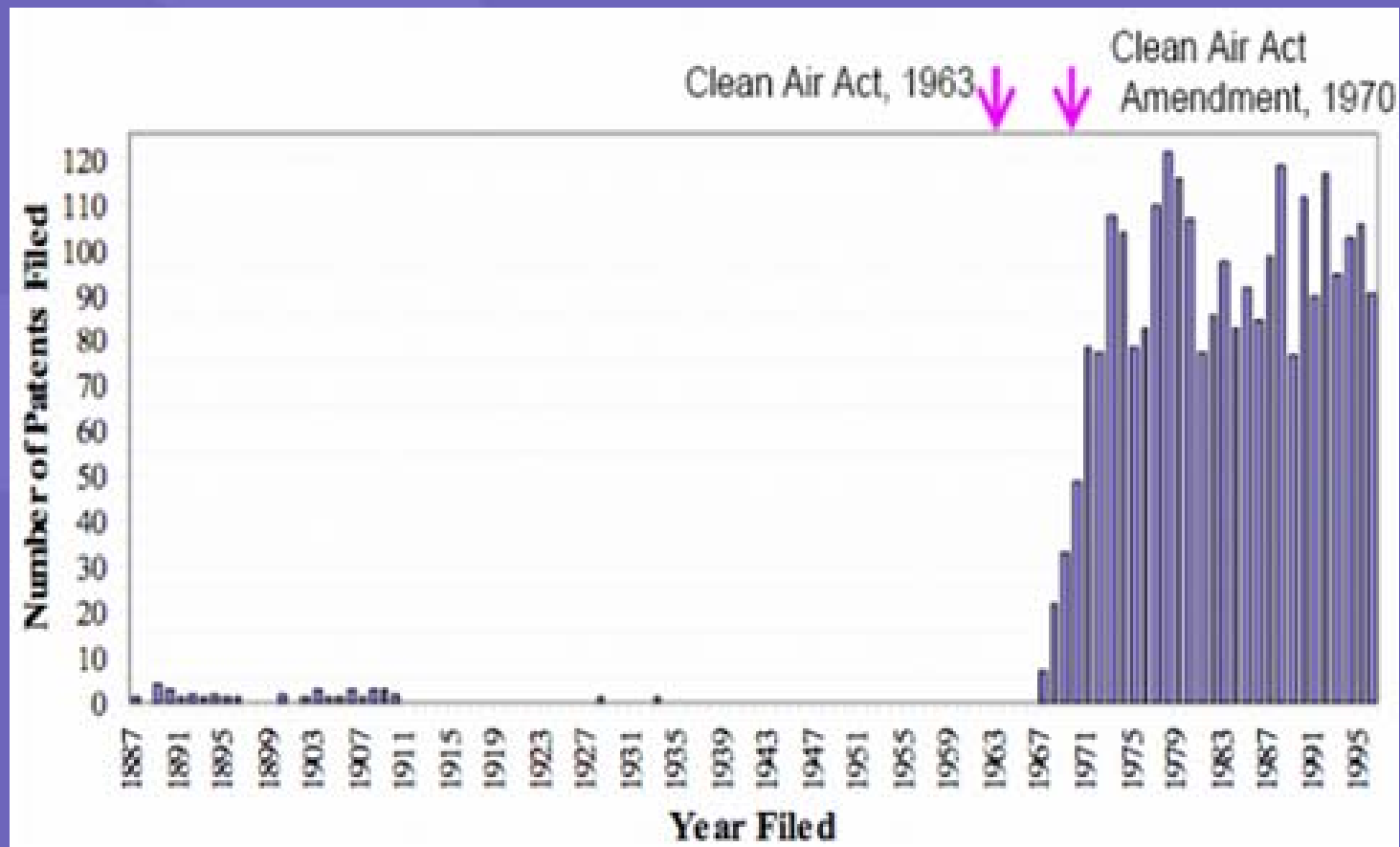
* Social insurance includes contributions to federal government social insurance (Medicare, Medicaid, and Social Security) plus private spending on "social protection" (i.e. private pensions, disability insurance, etc.).

We Can Afford it,

But..

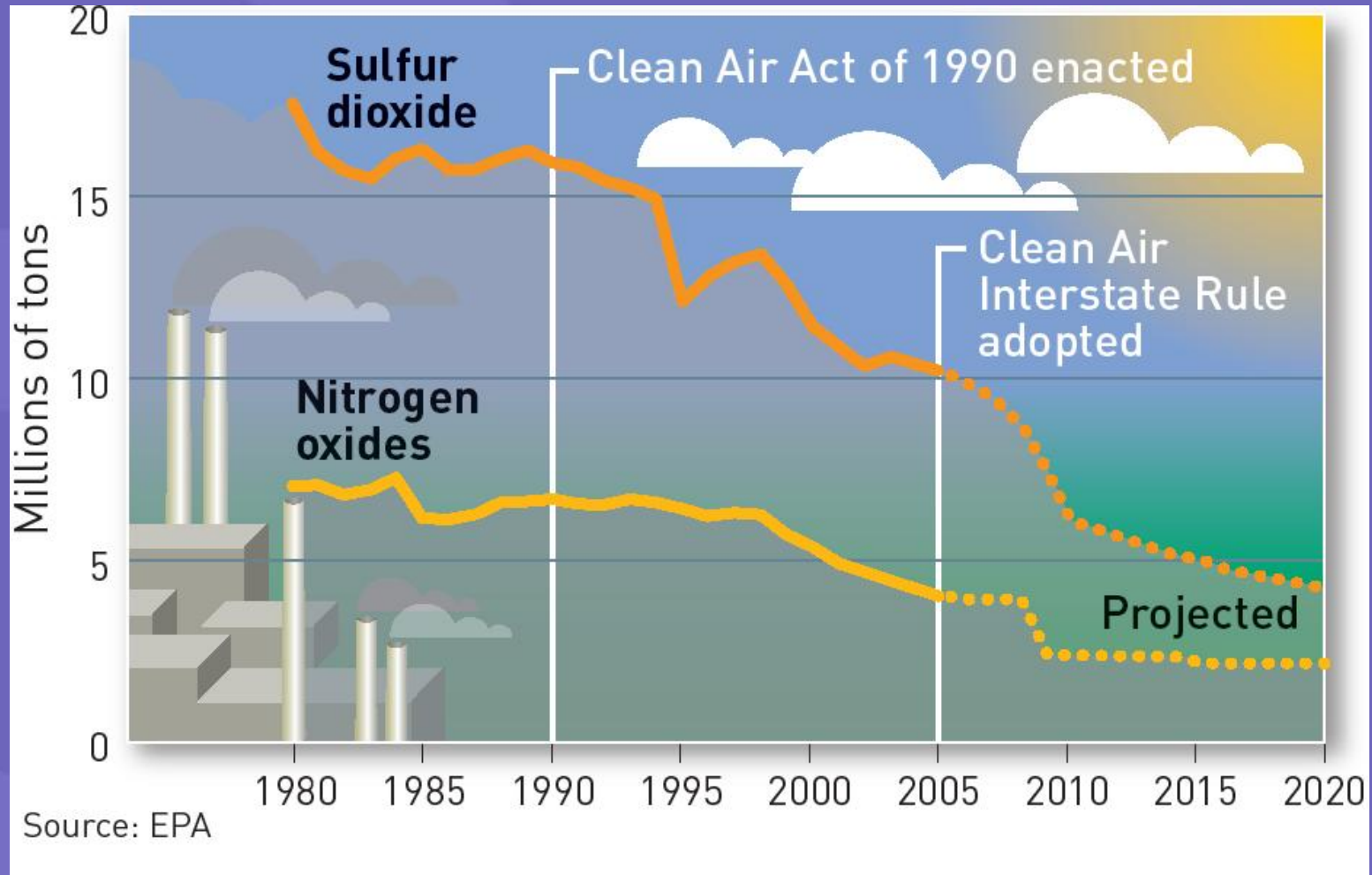
Can We Do It?

Public Policy Can Accelerate Technology



Source: The Effect of Government Actions on Technological Innovation for SO₂ Control
The EPA/DOE/EPRI Mega Symposium, August 20-23, 2001.

Cap-and-Trade is the Right Approach



What is cap-and-trade?

1. An absolute limit, or cap, on emissions from all covered sources
2. A system allows covered sources to use the power of American free markets to find the most-cost effective means to reduce emissions
 - you have to have both

Tremendous economic opportunity

Technological prowess drives the American economy

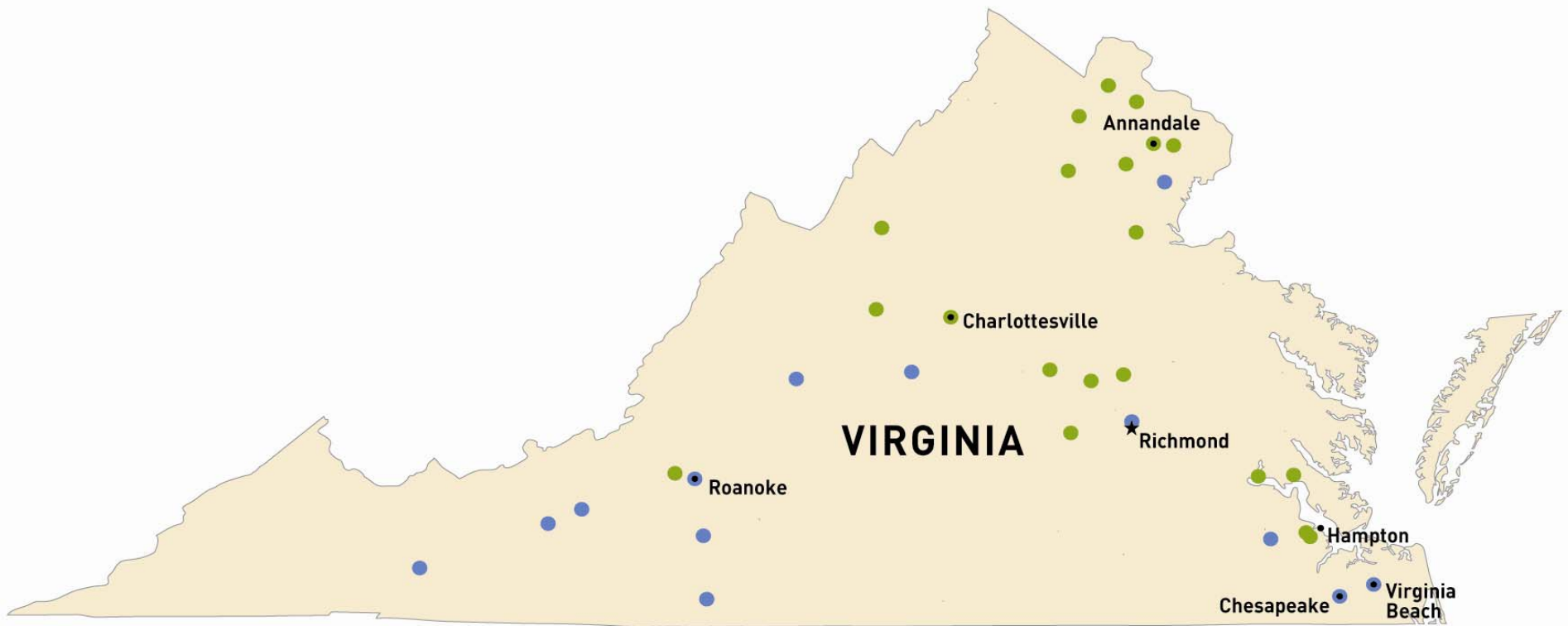
“Costs” of abatement amount to investments in the future

The low-carbon economy is the next technological revolution

- Carbon will rival the world’s largest markets
- Enormous future demand (China, India)
- A foundation for long-term American prosperity

“Could be the largest economic opportunity of the 21st century. ... It’s the mother of all markets.”
-- John Doerr

Virginia is Poised to Contribute



Green points= renewable energy companies

Blue point= energy efficiency companies

Questions?